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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/467,721      | 12/20/1999  | KENDYL A. ROMAN      |                     | 2729             |

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730 BANTRY COURT  
SUNNYVALE, CA 940873402

[REDACTED] EXAMINER

AN, SHAWN S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2613     |              |

DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| Application No.<br><b>09/467,721</b> | Applicant(s)<br><b>Kendyl Roman</b> |
| Examiner<br><b>Shawn An</b>          | Art Unit<br><b>2613</b>             |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on \_\_\_\_\_.

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

4)  Claim(s) 1-21 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-21 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1)  Notice of References Cited (PTO-892)

2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_

4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

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## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claims 11-16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: all of the apparatus as recited in claims 11-16 as noted above.

To avoid raising a question of new matter, the Applicant is cautioned to add no more than what is fully disclosed in the claim language.

### *Claim Objections*

3. Claims 1 and 5 are objected to because of the following informalities:  
On claim 1, line 6, “(b) and (c)” should be changed to “(a) and (b)”, because the “(a) and (b)” are referring to the steps “(a)” as recited in line 3, and “(b)” as recited in line 5.

On claim 5, line 1, “said” should be removed, because recited “encoded data buffers” are introduced for a first time.

Appropriate correction is required.

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***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-3, 7-9, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Astle (5,552,832).

**Regarding claim 1**, Astle discloses a method of compression of graphic images which make up a video stream, comprising the steps of:

(A) sub-sampling a number of pixel bits from an image selected from the graphic images (Fig. 4, 404);

(B) run-length encoding repeated instances of the number of pixel bits (Fig. 4, 412); and repeating steps (A) and (B) until each the number of pixel bits is encoded in an encoded data buffer (Fig. 2, 202).

**Regarding claim 7**, Astle discloses a method of decompressing an encoded video signal, comprising the steps of:

reading a stream of run-length encoded codes (Fig. 14, see RUN LENGTH CODES);

determining a series of pixels based on the values and run-lengths of the codes (Fig. 14, 1306; col. 20, lines 47-49);

combining the pixels into an image (1322; col. 21, lines 61-67; col. 22, lines 1-9).

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**Regarding claims 2 and 9,** an image dimension having a resolution of 320 X 240 pixels, are inherently well known in the art as corresponding to one quarter of standard VGA dimension of 640 X 480 pixels of resolution in the horizontal and the vertical direction, respectively.

**Regarding claim 3,** Astle discloses the number of pixel bits as being one of the set of 3, 4, 5, 8, 9, 12, 15, 16, and 24 (col. 5, lines 50-56) as specified.

Note: YUV component signal format are represented in 24 bits per pixel (8 bits for the luminance information (Y) and 8 bits for each of the two chrominance information (U and V)).

**Regarding claim 8,** Astle discloses displaying a series of images (Fig. 14, see TO DISPLAY).

**Regarding claim 19,** lossless/lossy compression, such as in MPEG standard, is inherently well known in the art.

6. Claims 1, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaddha et al (5,621,660).

**Regarding claim 1,** Chaddha et al discloses a method of compression of graphic images which make up a video stream, comprising the steps of:

(A) sub-sampling (Fig. 2, 210) a number of pixel bits from an image selected from the graphic images (col. 4, lines 54-60);

(B) run-length encoding repeated instances of the number of pixel bits (col. 5, lines 54-61); and

repeating steps (A) and (B) until each the number of pixel bits is encoded in an encoded data buffer (Fig. 2).

**Regarding claims 17 and 18,** Chaddha et al discloses one or more of the width, height of the images (Fig. 3, 160x120, 320x240, 640x480) and the number of pixel bits (relates to size of a display area, such as 160x120, 320x240) are variably altered by a receiver (decoder, 40) of the encoded data (col. 8, lines 63-67; col. 9, lines 1-5).

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7. Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Walsh (5,646,618).

**Regarding claims 5 and 6,** Walsh discloses an encoded video signal comprising a series of encoded data buffers, wherein a storage medium in which the encoded video signal is stored (Fig. 1, 120).

8. Claims 11-12 and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Agarwal (5,812,788).

**Regarding claims 11, 14, and 15,** Agarwal discloses a machine for compressing video frames, comprising:

- a video digitizer (Fig. 1, 102) for digitizing a frame from the video frames;
- a video memory (104) for receiving a plurality of pixels from the video digitizer;
- an encoding circuit (Fig. 5) for counting repeated instances of a pixel value (intra frame encoding) when scanning the plurality of pixels (col. 8, lines 4-9) and outputting a series of encoded data comprising a combined run-length field and a data field (Fig. 6, 610; col. 9, lines 46-58);
- a memory for storing encoded data (Fig. 1, 120); and
- input/output devices, which are storage medium (Fig. 1, 112) and a communications transmission channel (Fig. 1, 118).

**Regarding claim 12,** Agarwal discloses selecting one of a set of 3, 4, 5, 8, 9, 12, 15, 16, and 24 as the number of pixel bits (col. 4, lines 10-15).

**Regarding claim 16,** Agarwal discloses a machine for decompressing encoded data representing a video signal, comprising:

- an input/output device (Fig. 18, 1802) for reading the stream of encoded data;

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a decoding circuit (Fig. 18) which can decode the encoded data and output a stream of pixel values (1810); and

a memory (Fig. 2, 214) for storing an image comprising the stream of pixel values (decoded signals) that can be displayed (204 via 202) as frames of a video sequence

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Astle as applied to claims 1, 7, and 11 above, respectively, and further in view of Frederiksen (4,743,959).

**Regarding claims 4, 10, and 13,** Astle does not specifically disclose the pixel bits being extracted from the most significant bits of each color component.

However, Frederiksen teaches the pixel bits being extracted from the most significant bits of each color component (col. 7, lines 58-62) for filtering out noises which may happen in a low ordered bits.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method/apparatus for compressing graphic images as taught by Astle to incorporate the well known concept of the pixel bits being extracted from the most significant bits of each color component as taught by Frederiksen for filtering out noises which may happen in a low ordered bits.

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11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Astle as applied to claim 1 above, and further in view of Anastassiou (4,546,385).

**Regarding claim 20,** Astle does not specifically disclose images being enlarged by stretching prior to displaying.

However, Anastassiou et al teaches a conventional concept of pictures being enlarged by stretching prior to displaying (col. 2, lines 56-61) in order to maximize the displaying size of the monitor, such as in a widescreen TV monitor.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method of compression of graphic images as taught by Astle to incorporate the well known concept of pictures being enlarged by stretching prior to displaying as taught by Anastassiou in order to maximize the displaying size of the monitor, such as in a widescreen TV monitor.

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Astle as applied to claim 1 above, and further in view of Pinder et al (6,219,358 B1).

**Regarding claim 21,** Astle does not specifically disclose encrypting the number of pixel bits.

However, Pinder et al teaches a concept of encrypting the bitsteam (col. 9, lines 35-38) in order to safeguard the encoded bit stream.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method of compression of graphic images as taught by Astle to incorporate the concept of encrypting the bitsteam as taught by Pinder et al in order to safeguard the encoded bit stream.

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***Conclusion***

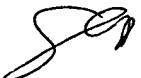
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A) Shimizu et al (6,064,324), Digital signal encoding and decoding method and apparatus without transmitting information on quantization width.
- B) Hartung et al (5,309,232), Dynamic bit allocation for three-dimensional subband video coding.

14. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday .

SHAWN S. AN  
PATENT EXAMINER



SSA

September 24, 2002